Recording NPS Roads and Bridges

Todd Croteau

Original Bureau of Public Roads construction reports provide HAER researchers with details of the building process from excavation to completion and offer pictorial evidence of construction technologies and labor practices. Construction of Deer Creek Bridge in Mount Rainier National Park, 1939.

HAER is now in its fifth year of a long-range documentation project for the National Park Service Roads and Bridges Program. The Roads and Bridges Recording Project is committed to the collection and creation of data pertaining to all National Register eligible historic bridge structures maintained by the National Park Service (NPS). Over the past several years more attention has turned to the idea of including the actual roads and road-related cultural landscapes as research topics. HAER is exploring new facets of the built environment by including not only the structures, but also the transportation system as a whole in relation to the natural environment. There is a history of construction in the national parks that reflects the concept of harmonizing the built with the natural through the use of native material and designs that grow from the landscape. Examples of this philosophy are most noticeable in the architecture of park buildings; however, the extensive engineering works of the park road systems integrate so well that they are often unseen by visitors partaking of the wondrous vistas. In many ways, the roads are probably the most successfully integrated structures in the landscape.

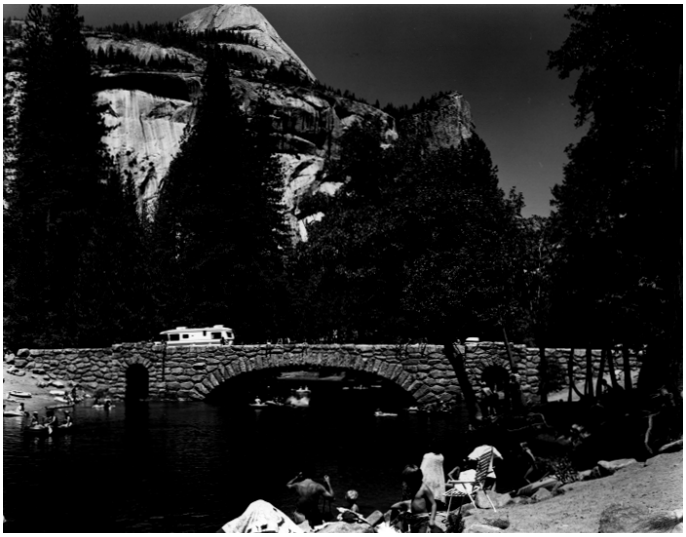
In any area in which the preservation of the beauty of Nature is a primary purpose, every modification of the natural landscape, whether it be by the construction of a road or erection of a shelter, is an intrusion. A basic objective…is to hold these intrusions to a minimum and so design them that, besides being attractive to look upon, they appear to belong to and be a part of their settings.

—Arno B. Cammerer, Director of the National Park Service, 1935

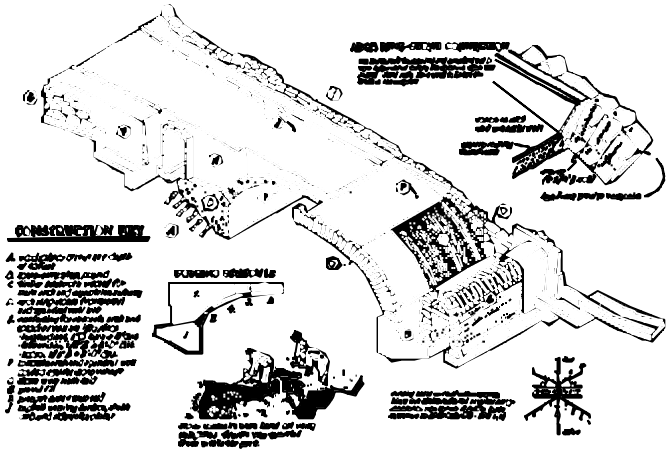
Many of these roads were designed more than 100 years ago and their builders were unaware of the traffic demands occurring today. In recent years park roads have experienced increased visitation and a rise in the number of oversized vehicles, requiring inadequate roads to be upgraded and the crumbling infrastructure of the national park system to be rebuilt. Many historically significant transportation structures are threatened by replacement or alterations that may weaken the integrity of the original appearance. Although some of these bridges and tunnels are beyond their carrying capacity and require replacement, HAER hopes to preserve-on-paper the intrinsic qualities of the structures that have become a symbol of the NPS commitment to "lay lightly on the land."

HAER is documenting four major eras of design and construction in the national park system—early market-driven access, Army Corps of Engineers, National Park

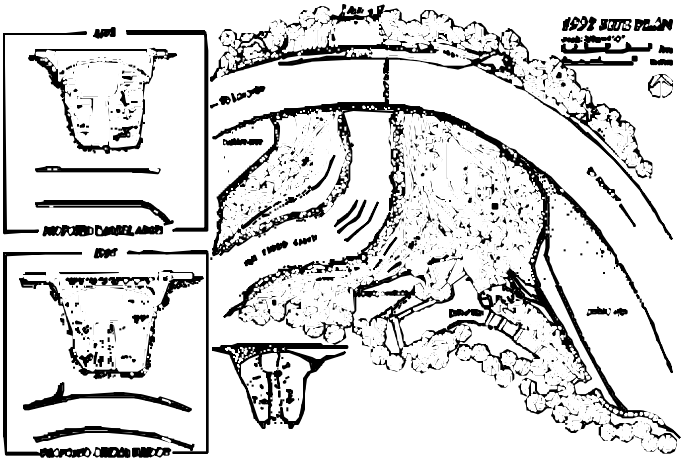
*(**Roads and Bridges**—continued on page 4)*



Continued visitor increases are placing greater demands on park infrastructure and many road-related resources will require replacement. Contemporary HAER photos are contrasted with historic images to illustrate a structure's evolution. Stoneman Bridge, built in 1932, spans the Merced River in Yosemite National Park. Photo by Bryan Grogan, 1991, HAER.



Construction detail of Stoneman Bridge, 1932, illustrates the process of bridge building in the national parks. Delineated by David Fleming, 1991, HAER.



This plan and elevation of Christine Falls Bridge, built at Mount Rainier National Park in 1928, illustrates the evolution of NPS designs. Several proposals for concrete structures, each with different attitudes toward the landscape, result in a bridge that appears to grow from the land and integrate into its setting. The use of native stone facing and curved roadways harmonizes the built with the natural. Delineated by Daniela Trettel, 1992, HAER.

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Service, and Bureau of Public Roads. In many cases, the first access to these new preserves was achieved by entrepreneurs hoping to find their wealth in mining or tourism. Pack trails and rough roads were built using hand labor. Since the first national parks were administered by the military until the creation of the NPS in 1916, the U.S. Army Corps of Engineers was responsible for all road and bridge construction in the preserves. The Corps created transportation networks that showcased the scenic wonders of a park while maintaining a sensitivity to the natural landscape.

A small collection of Army Corps structures exists in the NPS today and their road systems still retain most of the original character. Implementation and maintenance of roads in the national parks was transferred to the newly formed NPS in 1916. Almost immediately, the Secretary of the Interior, Franklin Lane, reaffirmed the Army Corps' philosophy toward road construction. In his Statement of National Park Policy, he addressed road construction specifically by calling for the harmonizing of roads, trails, buildings and other improvements with the landscape, and the employment of "trained engineers who either possess the knowledge of landscape architecture or have a proper appreciation of the aesthetic value of park lands." In 1926, the NPS and the Bureau of Public Roads (BPR, U.S. Department of Agriculture) reached an agreement that the BPR would take responsibility for upgrading and constructing new roads in the national park system. Park landscape architects worked with BPR engineers to create new structures that continued to harmonize with the natural settings, while allowing safe passage of the modern automobile. The BPR continued construction in the national parks through the 1950s under several different titles. Today the Federal Highway Administration of the Department of Transportation oversees road and bridge building in the national parks.

Like most HAER programs, the NPS Roads and Bridges Documentation Project will generate written historical narratives, ink-on-Mylar measured drawings and large-format black and white photographs of significant structures. An added component to the archival documentation is the design of an illustrated brochure that depicts the road and bridge building history of each national park. The brochure is produced by the project and delivered to the parks for distribution. The negatives of the publication are also given to the parks for future reprinting and continued distribution to visitors.

The NPS Roads and Bridges Recording Project began with documentation of the National Capital Region structures in Washington, DC, and has since moved to the great western parks. Surveys of Yellowstone National Park's loop road, Glacier National Park's Going-to-the-Sun Road, Yosemite National Park and Mount Rainier National Park have been developed to date. Future projects include the parks along the Colorado River valley and Acadia National Park.

HAER's National Park Service Roads and Bridges Recording Project hopes to identify the structures that are most representative of the NPS rustic style and develop detailed surveys that will interpret the sites for future generations—not only for visitors, but also for those charged with maintaining existing spans and designing the new structures of our Nation's most precious preserves. Parks are faced with the realities of cost-effectiveness, the issues of safety and the need for speed, but must consider the aesthetics.

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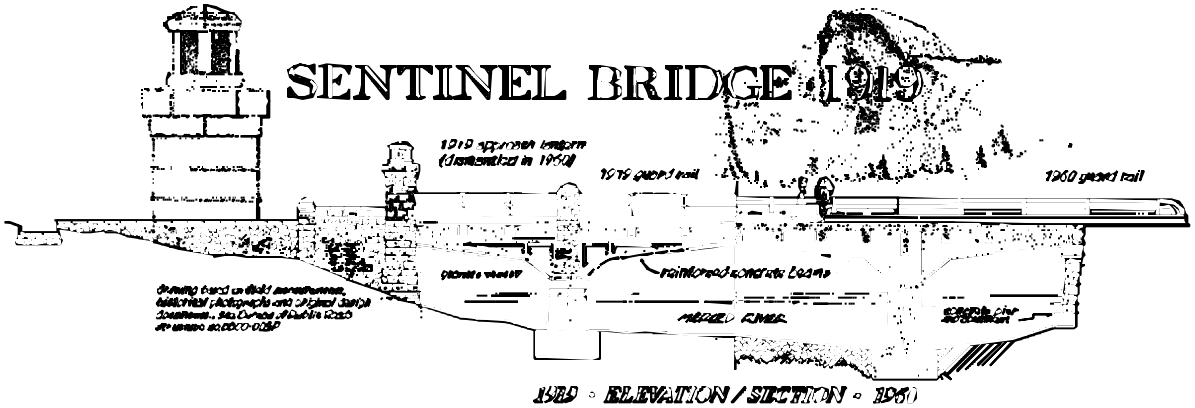

Over the life span of many park bridges, alterations occur to the structures that change their appearance or function. HAER develops illustrations that interpret these changes from past to present using historical photographs, original drawings and written reports found in park archives. Yosemite National Park's Sentinel Bridge has seen dramatic alterations and is now scheduled for replacement. Delineated by Marie-Claude LeSauteur, 1991, HAER.